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Abstract

Many mainstream schools of economics argue that work is a burden, while nonmainstream schools argue that this might not be entirely true. This paper aims to reconcile the differences by suggesting that individuals will balance income and leisure only after the necessary expense for their current living standard is met. Thus, whether work is a burden depends upon two criteria. (1) In terms of marginal utility, before (after) such expense is met, the marginal utility per labor hour is positive (negative), i.e., work is not (is) a burden. (2) In terms of total utility, the total utility provided by labor is positive, i.e., work is not a burden. Three applications show that the above explanation can reconcile different historical perspectives, explain various discrepancies about labor supply between neoclassical theory predictions and empirical findings, and reconcile the different interpretations about lottery winners' labor supply.

Introduction

Whether work is a burden is a fundamental question in labor economics. (1) Mainstream economics argues that work is a burden. (2) Some nonmainstream suggests that work has intrinsic value. (3) The answer from mainstream economists is that although marginal utility can be positive in the initial hours, it becomes negative at the margin (Lazear 2000). Rätzel (2012) empirically shows that the marginal utility per labor hour is first positive and then negative; however, the mechanism of the change in marginal utility remains unknown.

This paper reconciles the above opinions by proposing that individuals balance consumption (measured by income) and leisure only after the necessary expense for the current living standard (measured by minimum required income (MRI)) is met. The utility function is, for example,

$$u = (c - M)l^\alpha \quad (1)$$

Thus, whether work is a burden depends upon several criteria. (1) In terms of marginal utility, whether work is a burden is determined by whether the MRI is met. Before (after) the MRI is met, the marginal utility per labor hour is positive (negative), i.e., work is not (is) a burden. (2) In terms of total utility, the total utility provided by labor is positive, i.e., work is not a burden.

Empirical strategy and results

This paper provides empirical evidence for this hypothesis using German Socio-Economic Panel (GSOEP) data and subjective well-being (SWB) as a measure of utility.

The empirical strategy has two steps. First, this paper demonstrates that, *ceteris paribus*, individuals' SWB is maximized if they work the desired number of hours, after income is controlled for.

Table 1. SWB and desired working hours
Dependent Variable: Life Satisfaction

| | All sample | Sole earner | Not sole earner |
|-----------------------|---------------------------|---------------------------|---------------------------|
| Number of under hours | -0.0106*** (0.000799) | -0.0107*** (0.00145) | -0.00925*** (0.000982) |
| Number of over hours | -0.00837*** (0.000532) | -0.00793*** (0.000946) | -0.00787*** (0.000656) |

*** p<0.01, ** p<0.05, * p<0.1

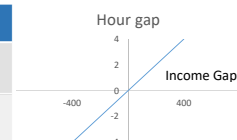
In the second step, this paper shows that the desired number of hours coincides well with the MRI. Specifically, when the hour gap (actual working hour – desired hour) is regressed on income gap (actual income – MRI), the coefficient is positive and the constant term is ZERO.

Table 2. Hour gap and income gap
Dependent Variable: Working hours gap

| | All sample | Sole earner | No outliers |
|------------|---------------------------|---------------------------|---------------------------|
| Income Gap | 0.000316*** (6.09e-05) | 0.000493*** (0.000167) | 0.000365*** (0.000124) |
| Constant | 2.604* (1.475) | 0.723 (2.874) | -0.0111 (2.867) |

*** p<0.01, ** p<0.05, * p<0.1

Figure 1. Hours and income gap



Application 1: a historical review

In mainstream, both mercantilists and classical economists believe that work is bad. However, mercantilists suggests that a low wage and low living standard increase labor supply (suppose $c = wh$, then easy to derive $\frac{\partial h}{\partial w} < 0$ from equation (1)), while classical economists believe that a low living standard makes laborers despair and hopeless and thus unwilling or unable to work (easy to derive $\frac{\partial h}{\partial M} > 0$). In late 19th century, the marginalism framework provided by neoclassical economics becomes mainstream because of its explanatory power. However, if $c < M$, the predictions may be inconsistent (see later).

Nonmainstream economists (such as utopian economists, Karl Marx, and institutional economists) suggest that work could be good. This paper makes two comments. First, in terms of marginal utility, work is bad in the margin; however, there are two potential exceptions: (1) when individuals' working hours are less than desired, such as for the unemployed (discussed later); and (2) if individuals are able to choose work activity that they enjoy. Second, in terms of total utility, work is good.

Application 2: labor of low-income

When $c < M$, work is good in marginal. Assuming that individuals always balance consumption and leisure generates inconsistent predictions. Two groups are likely to have $c < M$: the unemployed and in-work benefits recipients.

The consensus in happiness economics is that unemployment reduces SWB even after income is controlled for (Clark 2018), a violation of the notion that individuals always balance consumption and leisure. Thus, various nonpecuniary explanations, such as psychological effects, are proposed. In contrast, few scholars emphasize the pecuniary aspects of unemployment and suggest that the financial strain is the root cause (Paul, Hassel, and Moser 2018). The financial strain also explains why there is large heterogeneity (Luo forthcoming) and why there is no adaptation (Luo 2019).

In-work benefits are predicted to reduce labor hours if individuals always balance income and leisure. However, little supportive empirical evidence exists (Chan and Moffitt 2018; Nichols and Rothstein 2016). Equation (1) predicts that individuals will not reduce labor hours if $c < M$.

Application 3: labor of lottery winners

Large heterogeneity is observed in the labor supply response of lottery winners, so both opponents and proponents of a Basic Income Guarantee (BIG) cite the literature to support their opinion (Gilbert et al. 2018).

The most salient predictor of the probability of quitting a job is the amount of the winnings. If the winners are able to cover the MRI, then they are likely to quit their jobs. Another salient predictor is earning potential. For those with low earning potential, if they win a large amount, then they are likely to quit forever.

The ethnographic study of Smith and Razzell (1975) provides supportive evidence. All the winners in their study win large amounts and have relatively low earning potentials. All the winners quit immediately because both they and the people around them believe that rich people should not work.

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